

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

PCT/KR2002/002157





Applicant's or agent's file reference OPP021378KR	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. <b>PCT/KR2002/002157</b>	International filing date (day/month/year) <b>19 NOVEMBER 2002 (19.11.2002)</b>	Priority date (day/month/year) <b>04 NOVEMBER 2002 (04.11.2002)</b>
International Patent Classification (IPC) or national classification and IPC  <b>IPC7 G03F 7/039, G03F 7/027</b>		
Applicant  <b>DONGJIN SEMICHEM CO., LTD. et al</b>		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 3 sheets, including this cover sheet.
- ☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of \_\_\_\_\_ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand  <b>13 MAY 2004 (13.05.2004)</b>	Date of completion of this report  <b>22 FEBRUARY 2005 (22.02.2005)</b>
Name and mailing address of the IPEA/KR  Korean Intellectual Property Office 920 Dunsan-dong, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140	Authorized officer  KIM, Hyun Sook  Telephone No. 82-42-481-5584 

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/KR2002/002157

## 1. Basis of the report

### 1. With regard to the elements of the international application:\*

- ☒ the international application as originally filed
- ☐ the description:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the claims:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, as amended (together with any statement) under Article 19  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the drawings:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the sequence listing part of the description:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

### 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language English which is

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☒ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

### 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

### 4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets \_\_\_\_\_

### 5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

# INTERNATIONAL PRELIMINARY EXAMINATION

International application No.

PCT/KR2002/002157

## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. Statement

Novelty (N)	Claims	7 - 10	YES
	Claims	1 - 6, 11 - 16	NO
Inventive step (IS)	Claims	9 - 10	YES
	Claims	1 - 8, 11 - 16	NO
Industrial applicability (IA)	Claims	1 - 16	YES
	Claims		NO

### 2. Citations and explanations (Rule 70.7)

Reference is made to the following document:

D1: KR 2002-47866 (22. June. 2002)

1. Claims 1-6 of the present invention relate to acrylate compounds represented by formulas 1 and 2 and a method of manufacturing the same; and a copolymer represented by formula 3 and a method of manufacturing the same. However said acrylate compounds are the same as an acrylate compound disclosed in examples 4 and 7 of D1, and said method is also the same as the condensing method of alcohol and carbonyl chloride of D1. Thus claims 1-6 are not novel under PCT Article 33(2).

2. Claims 11-16 of the present invention relate to a photoresist composition, more particularly to the use and used amount of copolymers represented by formulas 3-5 as a resin, and a photoacid generator comprising an organic base selected from the group consisting of triethylamine, etc. and onium salt as additives and the amount thereof. D1 discloses the copolymer represented by formula 3 of the present invention in example 4, and the additives and their amounts of the present claims 12-16 are the same as or included into those disclosed in examples 3-12 of D1. Thus claims 11-16 of the present invention are not novel under PCT Article 33(2).

3. Claims 7 and 8 of the present invention relate to a terpolymer and a method of manufacturing the same, characterized in that said terpolymer has acrylate, norbornene compound, and maleic anhydride as monomers respectively and is represented by formula 4. However D1 discloses a terpolymer which has acrylate, norbornene compound, and maleic anhydride as monomers respectively in example 6. Though the norbornene compound of the present invention is a norbornene ester compound, differently from the norbornene compound of D1, both has substantially the same norbornene structure. In addition, the monomers of the present invention other than norbornene are the same as those of D1 and there is no indication in the present invention concerning the particular effect caused by said norbornene ester. Thus claims 7-8 of the present invention are considered to be readily invented by a person skilled in the art from the prior art document.